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EXAMINER	
HEYI, HENOK G	

ART UNIT	PAPER NUMBER
2627	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/578,717	HOLTMAN ET AL.	
	Examiner	Art Unit	
	HENOK G. HEYI	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 May 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show labels for different parts of the figures as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Examiner recommends applicant to name each block in the schematic diagram. For example, instead of labeling it 102, it is advisable to write "controller" inside the block for clarification.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The abstract of the disclosure is objected to because of redundant use of the words "for improvement" at the beginning of the abstract. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Shinsuke et al. JP 11-086447 (Shinsuke hereinafter).

Regarding claim 1, Shinsuke teaches a method for providing seamless AB loop play in a reproducing apparatus (loop reproduction function, repeat A-B regenerative function, para [0011] to [0013]), the method comprising the acts of: receiving a command to enter an AB loop play mode, said command including at least a starting point parameter A and a terminating point parameter B (specified starting point A to the terminal point B, para {0011]); identifying a set of N data blocks stored on a storage medium, responsive to said command; retrieving said N data blocks from said storage medium; storing said N data blocks in a memory; reading said N data blocks from said memory in a first presentation cycle of said AB loop play mode; presenting said N data blocks to a user in said first presentation cycle of said AB loop play mode; deleting a first subset of data blocks P from among said stored N data blocks from said memory

subsequent to reading said first subset P of data blocks from said memory; and retaining a second subset of data blocks M from among said stored N data blocks in said memory subsequent to reading said second subset of data blocks from said memory for use in one or more subsequent presentation cycles of said A-B loop play (if the data in each buffer becomes less than a part for the minimum regeneration time, two or more sounds and animations can be reproduced by reading and adding data from CD-ROM1 until it becomes the data volume for the highest regeneration time, without breaking off, para [0056]).

Regarding claim 2, Shinsuke teaches the method of Claim 1, further comprising the acts of: retrieving said deleted first subset of data blocks P from said storage medium for use in said one or more subsequent presentation cycles of said A-B loop play; and presenting said retrieved first subset of data blocks P and said retained second subset of data blocks M to said user in said one or more subsequent presentation cycles of said AB loop play (if the data in each buffer becomes less than a part for the minimum regeneration time, two or more sounds and animations can be reproduced by reading and adding data from CD-ROM1 until it becomes the data volume for the highest regeneration time, without breaking off, para [0056]).

Regarding claim 3, Shinsuke teaches the method of Claim 1, wherein said request further comprises an identifier of at least one data block to be retained from among said second subset of data blocks M to be retained in said one or more subsequent presentation cycles of said AB loop play (if the data in each buffer becomes less than a part for the minimum regeneration time, two or more sounds and animations

can be reproduced by reading and adding data from CD-ROM1 until it becomes the data volume for the highest regeneration time, without breaking off, para [0056]).

Regarding claim 4, Shinsuke teaches the method of Claim 1, further comprising the act of identifying at least one data block to be retained from among said second subset of data blocks M to be retained, wherein said identification is made in dependence upon knowledge of disc retrieval times of at least one data block from among said N data blocks (if the data in each buffer becomes less than a part for the minimum regeneration time, two or more sounds and animations can be reproduced by reading and adding data from CD-ROM1 until it becomes the data volume for the highest regeneration time, without breaking off, para [0056]).

Regarding claim 5, Shinsuke teaches the method of Claim 4, wherein said knowledge of said disc retrieval times is a knowledge of higher than average disc retrieval times of said at least one data block from among said N data blocks (if the data in each buffer becomes less than a part for the minimum regeneration time, two or more sounds and animations can be reproduced by reading and adding data from CD-ROM1 until it becomes the data volume for the highest regeneration time, without breaking off, para [0056]).

Regarding claim 6, Shinsuke teaches the method of Claim 1, further comprising the act of identifying at least one data block from among said second subset of data blocks M to be retained in dependence upon an allocation profile of said N data blocks on said storage medium (see para [0051]).

Regarding claim 7, Shinsuke teaches the method of Claim 6, wherein said

dependence upon said allocation profile includes a dependence upon discontinuities in said allocation profile (it is realizable to play continuously the data currently recorded discontinuously on the optical disc, para [0025]).

Regarding claim 8, Shinsuke teaches the method of Claim 1, wherein the act of retaining said second subset of data blocks M in said memory, further comprises the act of retaining the first X blocks from among said N data blocks retrieved from said memory in said one or more subsequent presentation cycles of said AB loop play (see para [0051]).

Regarding claim 9, Shinsuke teaches the method of Claim 2, wherein said first subset of data blocks P to be retrieved and second subset of data blocks M to be retained are determined such that a calculated time to retrieve said first subset of data blocks P in said one or more subsequent presentation cycles is below a threshold time (the compressed audio data read in the optical disc can be accumulated 2 seconds or more, and the regeneration time will be about 10 seconds, para [0025]).

Regarding claim 10, Shinsuke teaches the method of Claim 9, wherein said threshold time corresponds to a time below which a memory buffer underflow cannot occur (the compressed audio data read in the optical disc can be accumulated 2 seconds or more, and the regeneration time will be about 10 seconds, para [0025]).

Regarding claim 11, Shinsuke teaches the method of Claim 9, wherein said calculated time is computed in dependence upon pre-supplied data included in said request identifying at least one of said data blocks M to be retained in said one or more subsequent presentation cycles of said AB loop play (the compressed audio data read

in the optical disc can be accumulated 2 seconds or more, and the regeneration time will be about 10 seconds, para [0025]).

Regarding claim 12, Shinsuke teaches the method of Claim 9, wherein said calculated time is computed in dependence upon knowledge of certain of said data blocks M from among said N data blocks having a higher than average retrieval time (the compressed audio data read in the optical disc can be accumulated 2 seconds or more, and the regeneration time will be about 10 seconds, para [0025]).

Regarding claim 13, Shinsuke teaches the method of Claim 9, wherein said calculated time is computed in dependence upon an allocation profile of said N data blocks on said storage medium (the compressed audio data read in the optical disc can be accumulated 2 seconds or more, and the regeneration time will be about 10 seconds, para [0025]).

Regarding claim 14, Shinsuke teaches the method of Claim 13, wherein said dependence upon said allocation profile includes a dependence upon discontinuities in said allocation profile (it is realizable to play continuously the data currently recorded discontinuously on the optical disc, para [0025]).

Regarding claim 15, Shinsuke teaches the method of Claim 2, wherein said first subset of data blocks P and said second subset of data blocks M are determined such that a calculated time to retrieve said first subset P in said one or more subsequent presentation cycles minimizes the number of occurrences of a memory buffer underflow (The storage capacity between this starting point SP and temporary terminal point EP1

should just be capacity for which it is sufficient in order to keep the reproduced sound by the data read from RAM13 to within a time [to which the optical head 3 accesses the data of the request on the optical disc 1] from breaking off, para [0051]).

Regarding claim 16, Shinsuke teaches the method of Claim 15, wherein said calculated time is computed in dependence upon pre-supplied data included in said request identifying at least one of said data blocks M (the compressed audio data read in the optical disc can be accumulated 2 seconds or more, and the regeneration time will be about 10 seconds, para [0025]).

Regarding claim 17, Shinsuke teaches the method of Claim 15, wherein said calculated time is computed in dependence upon knowledge of certain data blocks from among said N data blocks having an associated higher than average retrieval time (the compressed audio data read in the optical disc can be accumulated 2 seconds or more, and the regeneration time will be about 10 seconds, para [0025]).

Regarding claim 18, Shinsuke teaches the method of Claim 15, wherein said calculated time is computed independence upon an allocation profile of said N data blocks on said storage medium (The storage capacity between this starting point SP and temporary terminal point EP1 should just be capacity for which it is sufficient in order to keep the reproduced sound by the data read from RAM13 to within a time [to which the optical head 3 accesses the data of the request on the optical disc 1] from breaking off, para [0051]).

Regarding claim 19, Shinsuke teaches the method of Claim 18, wherein said dependence upon said allocation profile includes a dependence upon discontinuities in said allocation profile (it is realizable to play continuously the data currently recorded discontinuously on the optical disc, para [0025]).

Regarding claim 20, Shinsuke teaches the method of Claim 1, wherein said first subset of data blocks P and said second subset of data blocks M are determined such that a calculated time to retrieve said first subset P in said one or more subsequent presentation cycles is sufficient to prevent a memory buffer underflow except at a boundary transition from a terminating point defined by a terminating point parameter B to a starting point defined by a starting point parameter A in said one or more presentation cycles (The storage capacity between this starting point SP and temporary terminal point EP1 should just be capacity for which it is sufficient in order to keep the reproduced sound by the data read from RAM13 to within a time [to which the optical head 3 accesses the data of the request on the optical disc 1] from breaking off, para [0051]).

Regarding claim 21, Shinsuke teaches the method of Claim 20, wherein said calculated time is computed in dependence upon pre-supplied data included in said request identifying at least one of said data blocks M (the compressed audio data read in the optical disc can be accumulated 2 seconds or more, and the regeneration time will be about 10 seconds, para [0025]).

Regarding claim 22, Shinsuke teaches the method of Claim 20 wherein said calculated time is computed in dependence upon knowledge of certain data blocks from among said N data blocks having an associated higher than average retrieval time (the compressed audio data read in the optical disc can be accumulated 2 seconds or more, and the regeneration time will be about 10 seconds, para [0025]).

Regarding claim 23, Shinsuke teaches the method of Claim 20, wherein said calculated time is computed in dependence upon an allocation profile of said N data blocks on said storage medium (the compressed audio data read in the optical disc can be accumulated 2 seconds or more, and the regeneration time will be about 10 seconds, para [0025]).

Regarding claim 24, Shinsuke teaches the method of Claim 23, wherein said dependence upon said allocation profile includes a dependence upon discontinuities in said allocation profile (it is realizable to play continuously the data currently recorded discontinuously on the optical disc, para [0025]).

Regarding claim 25, Shinsuke teaches a method for providing seamless AB loop play in a reproducing apparatus (loop reproduction function, repeat A-B regenerative function, para [0011] to [0013]), the method comprising the acts of: retaining, in a memory, a first subset of data blocks M from a sequence of N data blocks in one or more presentation cycles of said AB loop play mode; and retrieving, from a storage medium, a second subset of data blocks P from said sequence of N data blocks in said one or more presentation cycles of said AB loop play mode, wherein said first subset of

data blocks M and said second subset of data blocks P collectively comprise N data blocks to be displayed in said one or more presentation cycles of said AB loop play (if the data in each buffer becomes less than a part for the minimum regeneration time, two or more sounds and animations can be reproduced by reading and adding data from CD-ROM1 until it becomes the data volume for the highest regeneration time, without breaking off, para [0056]).

Regarding claim 26, Shinsuke teaches the method of Claim 25 wherein said calculated time is computed in dependence upon pre-supplied data included in said request identifying at least one of said data blocks M (the compressed audio data read in the optical disc can be accumulated 2 seconds or more, and the regeneration time will be about 10 seconds, para [0025]).

Regarding claim 27, Shinsuke teaches the method of Claim 25, wherein said at least one data block from among said first subset of data blocks M is identified in dependence upon knowledge of certain of said M data blocks having a higher than average retrieval time (the compressed audio data read in the optical disc can be accumulated 2 seconds or more, and the regeneration time will be about 10 seconds, para [0025]).

Regarding claim 28, Shinsuke teaches the method of Claim 25, wherein at least one data block from among said first subset of data blocks P is identified in dependence upon an allocation profile of said N data blocks on said storage medium (The storage capacity between this starting point SP and temporary terminal point EP1 should just be

capacity for which it is sufficient in order to keep the reproduced sound by the data read from RAM13 to within a time [to which the optical head 3 accesses the data of the request on the optical disc 1] from breaking off, para [0051]).

Regarding claim 29, Shinsuke teaches the method of Claim 28, wherein said dependence upon said allocation profile includes dependence upon discontinuities in said allocation profile (it is realizable to play continuously the data currently recorded discontinuously on the optical disc, para [0025]).

Regarding claim 30, Shinsuke teaches the method of claim 25, wherein said first subset of data blocks M and said second subset of data blocks P are determined such that a calculated time to retrieve said first subset P of data blocks in said one or more presentation cycles minimizes the number of occurrences of a memory buffer underflow (The storage capacity between this starting point SP and temporary terminal point EP1 should just be capacity for which it is sufficient in order to keep the reproduced sound by the data read from RAM13 to within a time [to which the optical head 3 accesses the data of the request on the optical disc 1] from breaking off, para [0051]).

Regarding claim 31, Shinsuke teaches the method of Claim 25, wherein said first subset of data blocks P and said second subset of data blocks M are determined such that a calculated time to retrieve said first subset P of data blocks in said one or more subsequent presentation cycles is sufficient to prevent a memory buffer underflow except at a boundary transition from a terminating point defined by a terminating point parameter B to a starting point defined by a starting point parameter A in said one or

more presentation cycles (The storage capacity between this starting point SP and temporary terminal point EP1 should just be capacity for which it is sufficient in order to keep the reproduced sound by the data read from RAM13 to within a time [to which the optical head 3 accesses the data of the request on the optical disc 1] from breaking off, para [0051]).

Regarding claim 32, Shinsuke teaches a playback apparatus for providing seamless AB loop play in a reproducing system (loop reproduction function, repeat A-B regenerative function, para [0011] to [0013]), the apparatus comprising: a memory (104) configured to store a subset of N data blocks; a presentation mechanism configured to read said stored data blocks from said memory for display to a user in a plurality of successive AB loop presentation cycles; a controller configured to retrieve said N data blocks from a storage medium to be stored in said memory, receive and process requests to enter said AB loop play, initialize the presentation mechanism to perform said AB loop play; the controller being further configured to remove a first subset of data blocks P from the memory subsequent to being read by the presentation mechanism and retain a second subset of data blocks M in the memory subsequent to being read by the presentation mechanism (if the data in each buffer becomes less than a part for the minimum regeneration time, two or more sounds and animations can be reproduced by reading and adding data from CD-ROM1 until it becomes the data volume for the highest regeneration time, without breaking off, para [0056]).

Regarding claim 33, Shinsuke teaches the playback apparatus of Claim 32, wherein said controller identifies said first subset of data blocks P and said second

subset of data blocks M such that a calculated time to retrieve said first subset of data blocks P from said storage medium in said plurality of successive AB loop presentation cycles is below a threshold time (The storage capacity between this starting point SP and temporary terminal point EP1 should just be capacity for which it is sufficient in order to keep the reproduced sound by the data read from RAM13 to within a time [to which the optical head 3 accesses the data of the request on the optical disc 1] from breaking off, para [0051]).

Regarding claim 34, Shinsuke teaches the playback apparatus of Claim 33, wherein said threshold time corresponds to a time below which a memory buffer underflow cannot occur (The storage capacity between this starting point SP and temporary terminal point EP1 should just be capacity for which it is sufficient in order to keep the reproduced sound by the data read from RAM13 to within a time [to which the optical head 3 accesses the data of the request on the optical disc 1] from breaking off, para [0051]).

Regarding claim 35, Shinsuke teaches the playback apparatus of Claim 32, wherein controller said identifies at least one data block from among said second subset of data blocks M in accordance with pre-supplied data included in said request (The storage capacity between this starting point SP and temporary terminal point EP1 should just be capacity for which it is sufficient in order to keep the reproduced sound by the data read from RAM13 to within a time [to which the optical head 3 accesses the data of the request on the optical disc 1] from breaking off, para [0051]).

Regarding claim 36, Shinsuke teaches the playback apparatus of Claim 32, wherein controller said is further configured to identify at least one data block from among said second subset of data blocks M in dependence upon knowledge of certain of said M data blocks having an associated higher than average retrieval time (The storage capacity between this starting point SP and temporary terminal point EP1 should just be capacity for which it is sufficient in order to keep the reproduced sound by the data read from RAM13 to within a time [to which the optical head 3 accesses the data of the request on the optical disc 1] from breaking off, para [0051]).

Regarding claim 37, Shinsuke teaches the playback apparatus of Claim 32, wherein at least one data block from among said first subset P of data blocks is identified in dependence upon an allocation profile of said N data blocks on said storage medium (The storage capacity between this starting point SP and temporary terminal point EP1 should just be capacity for which it is sufficient in order to keep the reproduced sound by the data read from RAM13 to within a time [to which the optical head 3 accesses the data of the request on the optical disc 1] from breaking off, para [0051]).

Regarding claim 38, Shinsuke teaches the playback apparatus of Claim 33, wherein said dependence upon said allocation profile includes a dependence upon discontinuities in said allocation profile (it is realizable to play continuously the data currently recorded discontinuously on the optical disc, para [0025]).

Regarding claim 39, Shinsuke teaches the playback apparatus of Claim 32, wherein said first subset of data blocks M and said second subset of data blocks P are determined such that a calculated time to retrieve said first subset P of data blocks in said one or more presentation cycles minimizes the number of occurrences of a memory buffer undertow (The storage capacity between this starting point SP and temporary terminal point EP1 should just be capacity for which it is sufficient in order to keep the reproduced sound by the data read from RAM13 to within a time [to which the optical head 3 accesses the data of the request on the optical disc 1] from breaking off, para [0051]).

Regarding claim 40, Shinsuke teaches the playback apparatus of Claim 32, wherein said first subset of data blocks P and said second subset of data blocks M are determined such that a calculated time to retrieve said first subset P of data blocks in said one or more subsequent presentation cycles is sufficient to prevent a memory buffer undertow except at a boundary transition from a terminating point defined by a terminating point parameter B to a starting point defined by a starting point parameter A in said one or more presentation cycles (The storage capacity between this starting point SP and temporary terminal point EP1 should just be capacity for which it is sufficient in order to keep the reproduced sound by the data read from RAM13 to within a time [to which the optical head 3 accesses the data of the request on the optical disc 1] from breaking off, para [0051]).

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HENOK G. HEYI whose telephone number is (571)270-1816. The examiner can normally be reached on Monday to Friday 8:30 to 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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